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REMARKS

The Examiner rejected a number of claims under 35 U.S.C. 102(b) as being anticipated by U.S. Publication 2002/0135696 (Perlman) that describes a system and method for rendering graphics and video on a display. In particular, the Examiner's attention is directed to paragraphs [0027 – 0028]:

[0027] As mentioned above, if the display on which the content will be rendered is interlaced (e.g., an NTSC television), then the method proceeds to FIG. 3b. At 350, the system determines whether any of the source content is interlaced (e.g., a broadcast television signal) if so, then at 352 the system compares the resolution and/or scaling of the display with the resolution and/or scaling of the source content. **If the source content is not at the same resolution and/or scaling as the display, then at 354 the source content is deinterlaced (e.g., using one or more deinterlacing techniques known in the art) and, at 356, the source content is transformed to match the display resolution and/or scaling**.

[0028] At 358, the system determines whether any of the source content is graphical content. If not (i.e., if the source content is video) then the process proceeds directly to 366 where the video is composited and rendered on a display at 368. If some source content is graphical content, however, then at 360 the system determines whether any of the content is geometric content. If so, then at 362, the geometric content is geometrically rendered into a bitmap to fit the desired display resolution and aspect ratio. **At 364 a flicker filter is applied to the graphics content. Flicker filters are used to reduce image flicker when displaying progressive images on an interlaced display. Interlaced displays refresh, or update their images, at a significantly slower rate than personal computer displays**. Accordingly, when images created for progressive displays (e.g., PC monitors) are rendered on interlaced screens, the human eye detects the lower refresh rate, causing the computer-rendered images to appear to "flicker." A flicker filter is not typically required for video content because such a filter is employed during the video production process. Finally, at 366, the various types of video and/or graphics content are composited together and at 368, the final images are rendered on a display. Using the foregoing techniques, various types of video and graphics content, both geometric and bit-mapped content, may be properly rendered on interlaced and progressive displays at virtually any aspect ratio.

Referring also to Fig. 3B, if the display is interlaced, and some of the source content is not interlaced (i.e., progressive scan), then Perlman displays the progressive scan source material on an interlaced display concurrently with the interlaced source material. Perlman requires that a flicker filter MUST be applied in order to reduce image flicker when displaying progressive images on an interlaced display since interlaced displays refresh, or update their images, at a

significantly slower rate (i.e., frame rate) than personal computer displays. Therefore, not only does Perlman not convert the incoming source material to a format consistent with the display (Perlman displays progressive scan source material on an interlaced display), Perlman must then provide an ad hoc correction (flicker filter) **since there is no frame rate conversion used to synchronize the source material to a frame rate consistent with the display as is required by the invention** (i.e., since there is no frame rate conversion performed to synchronize the source material to the display and interlaced displays refresh, or update their images, at a significantly slower rate than personal computer displays, a noticeable flicker will occur due to the mismatch in the frame rate of the video and the refresh rate of the display).

The Examiner specifically relies upon Fig. 3a for support in rejecting the claims under 35 U.S.C. 102(b). More particularly, the Examiner states on page 3 first paragraph, "and a frame rate conversion unit configured to synchronize each converted data stream to a selected output frame rate (fig. 3a, the deinterlacer changes the frame rate of the interlaced video to be compatible with a progressive display". The Applicant has thoroughly examined Perlman and Fig. 3a in particular and has found no reference to frame rate conversion. According to Fig. 3a, Perlman only provides that any geometric content fit the display's resolution and scaling only (step 311) with no mention nor inference of synchronizing the frame rate of the video data to match that of the display.

In contrast to Perlman, the invention specifically requires a frame rate converter synchronize each converted data stream to be consistent with the display screen thereby obviating the need for a flicker filter.

More specifically, claim 1 provides:

A video processor for providing a single synchronized display video stream having a single display video format to a first display device having a first set of display attributes from a number of input video streams of different video formats, comprising:
a number of ports each of which is configured to receive one of the input video streams at a corresponding input video stream clock rate;

a number of configurable image converter units each coupled to an associated one of the ports for converting the corresponding input video stream to a corresponding converted video stream having the single display video format;

a configurable frame rate conversion unit configured to synchronize each converted data stream to an output frame rate consistent with the first set of display attributes; and

a system controller unit in communication with each of the configurable image converter units arranged to configure the image converter units in real time, wherein each of the configured image converter units convert the corresponding input video signal to the corresponding converted video stream having the single display video format.

Therefore, the Applicants believe that claim 1 is not anticipated by Perlman and respectfully request that the Examiner withdraw the 35 U.S.C. 102(b) rejection thereof.

The Examiner also rejected a number of claims under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of U.S. Publication 2004/0012577 of Naegle that describes a processor with a free running frame rate that does nothing to cure the stated deficiencies of Perlman. Therefore, the Applicants believe that no combination of Perlman or Naegle render the rejected claims unpatentable for being obvious.

CONCLUSION

The Applicants' believe that all pending claims are allowable in view of the remarks above. Should the Examiner believe that a further telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,

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